City and County of the City of Exeter.

ANNUAL REPORT

FOR 1897,

OF THE

Vital Statistics,

SANITARY WORK, &c.

JOHN WOODMAN, M.D., F.R.C.S.,
Fellow Royal Institute of Public Health,
Member Sanitary Institute,
Medical Officer of Health.

EXETER:
Printed by Burridge & Cannicott, Musgrave Alley, High Street.

1898.

I have the honour to present to the Right Worshipful the Mayor, Aldermen, and Council of the City of Exeter, my Annual Report for the Year 1897.

JOHN WOODMAN.

March, 1898.

CONTENTS.

General Observations	5
Vital Statistics	5 to 8
Disease Incidents (Notifiable Diseases)	9 to 11
Disease Incidents (Non-Notifiable Diseases) ..	12
Sanatorium Report (by Medical Officers in Charge) ..	13 to 17
Summary of Action taken to Limit Spread of Infectious Disease	18
List of Articles Disinfected	18
Sewage of Exeter	19 to 20
Water Supply of Exeter	20, 23
Slaughter-houses, Bakehouses, Dairies, Milkshops ..	24
Sale of Food and Drugs Act	24
Legal Proceedings	25, 26
Meteorological Readings	26, 27, 28
TABLE I.—Monthly Returns of Cases Notified to Medical Officer of Health	29
TABLE II.—Cases Notified for the Year and Deaths therefrom	30
TABLE III.—Shewing the Number of Deaths from all Causes	31
TABLE IV.—Shewing the Ages of Deaths from all Causes ..	32
TABLE V.—Being a Table of Deaths from all Causes, set out under their different Diseases and Ages ..	33 to 37
TABLE A.—Deaths in Eastern and Western Districts, Devon and Exeter Hospital, Workhouse, and Eye Infirmary being given separately .. .	39
TABLE B.—Population; Birth; Cases of Infectious Sickness	41
SANITARY INSPECTOR'S REPORT .. .	43
Public Abattoir, Slaughter-Houses, Drain Testing ..	44, 45
Unsound Meat, Vegetables, &c.; Dairies, Cowsheds, and Milkshops Order	45 to 47
Offensive Trades, Inspection of District	47
Reports of Sanitary Work completed in Year 1897 ..	49, 50
Factory and Workshops' Act	51
CHART I.—Shewing Weekly Notifications of Scarlet Fever, Typhoid Fever, and Diphtheria	At the End.
CHART 2.—Shewing Weekly Mortality from the above Diseases	,,
SPOT MAP of the City of Exeter, indicating the Numbers and Locality of each Death from the principal Zymotic Diseases	,,

Digitized by the Internet Archive
in 2017 with funding from
Wellcome Library

https://archive.org/details/b29198355

Annual Report.

GENERAL OBSERVATIONS.

General Observations.

In submitting my Annual Report for 1897, the difficulty expressed last year of estimating the population is even still more felt, for the reason that another year is added since the last census, and I would again hope that in the future the census may be more frequently taken. Taking into consideration the facts that 460 houses have been built since 1891, and the number of voids, I think I am not overestimating the population of Exeter at 38,000.

VITAL STATISTICS.

Birth Rate.

The total number of Births registered in Exeter in 1897 was 906, equal to a Birth-rate of 23·84 per 1,000.

The Registrar-General, in his summary for 1897, gives the Birth-rate for England and Wales as 29·7 per 1,000 of the population, exactly the same as that for 1896.

Birth Rate.

The Birth-rate is again below that of England and Wales, lower even than last year.

The low Birth-rate should be noted, as this means a small proportion of young adults and a large proportion of adults and old people, and is therefore unfavourable to a low Death-rate. This is shown by the fact that one-third of the deaths for this year were those of persons over 60 years of age.

The total number of Deaths in Exeter was 751, equal to a corrected Death-rate of 18·30 per 1,000 per annum.

By agreement with the Registrar-General, five-sevenths of the Deaths occurring in the Devon and Exeter Hospital are deducted from our Death-rate.

Death Rate.

The Death-rate for England and Wales is given, for the same period, as 17·4. The Death-rate for the 33 Great Towns is 19·1. The Death-rate for the 67 Large Towns (in which Exeter is included) is 17·2. The Death-rate for Exeter is lower than any other of the past ten years, except 1895 and 1896. It is 0·78 below that of the 33 Great Towns, and 1·12 above that of the 67 Towns in which we are classed. In England and Wales less the 100 Towns the Death-rate was 16·4 per 1,000 (for 1897).

The Death-rate in Exeter for Infants under one year is 161 per 1,000 Births. The Death-rate of Infants under one year in England and Wales is 156 per 1,000 Births. The Death-rate for the same number of infants was in the same time in the 33 Great Towns 177 per 1,000 Births, and in the 67 Towns 169 per 1,000 Births.

Infantile Mortality.

The Infantile mortality is 8 per 1,000 Births below that of the 67 Towns in which Exeter is classed.

The Death-rate of persons over 60 years was 68·08 per 1,000 at that group of ages.

The slightly increased Death-rate is more than accounted for by the mortality from measles and whooping cough, which were epidemic in the first half of the year.

Deaths in Public Institutions:—

In Devon and Exeter Hospital...	...	76
In City Workhouse	...	39
		115

The Death-rate for the last 10 years, in both Exeter and the 33 Great Towns, was:—

The following Table will show the comparative Rates for each Month or Year:—

City of Exeter.

Death Rate Statistics.

Month.	1888	1889	1890	1891	1892	1893	1894	1895	1896	1897
Jan.	24·	24·	26·6	28·3	36·1	22·3	31·3	24·35	19·2	26·5
Feb.	21·9	26·4	27·7	16·3	25 5	17·2	30 1	27·9	29·6	21·39
Mar.	24·1	22 6	25·7	23 8	18·8	20 7	22·7	28 39	13 71	23·6
April	24·4	22 9	24·1	27·3	14·3	21·3	20 7	18·92	17·2	21 76
May	18 8	15·55	17·69	23·7	17·2	13 68	15·0	15·1	14·84	11·33
June	13·6	9·45	14·2	22·5	10·4	12·53	14·76	10·39	19·63	15·0
July	13 4	15·76	11·	18·7	16·2	15·0	18·6	14·7	15·4	15·65
Aug.	16·6	15·7	12·4	14·4	13 6	15·5	13·8	15·47	13·94	24
Sept.	14·	19·3	15 66	17·1	23·	14·89	15·3	13·1	14·5	10·87
Oct.	17·5	19·4	15·3	†31·6	17·	13·9	18·6	16·6	14·5	15·36
Nov.	20·4	16·7	16 6	†27 3	13·76	18·63	21·2	15 08	17 1	13·81
Dec.	21·8	24·4	27·3	25·3	17·4	36·1	25·5	11·65	18·47	20·76
Total	230·5	232·16	235·25	276·3	223·26	221·73	247·56	212·15	205·40	220·03

† Epidemic of Measles.

The Death-Rate per 1000 for each year being:—

19·2	19·3	19·6	23·	18·6	18·47	20·68	17.47	17·2	18·32

In the 33 Great Towns.

Death Rate Statistics.

Month	1888	1889	1890	1891	1892	1893	1894	1895	1896	1897
Jan.	23. 1	23·1	25·46	26·3	33·1	25·50	23·8	19·82	19 2	19·7
Feb.	21·6	19·7	24 7	21·3	23·4	19·7	19·4	27·47	19·8	19·6
Mar.	21·6	20 5	23·3	22·2	22·6	20·5	19·85	29·57	19·6	18·5
April	21.15	19·1	20·37	23·7	21·8	20·7	18·85	20·2	19·04	18·3
May	18·3	17·8	19·2	30·5	19·7	18·5	17·5	17·4	18·15	16·85
June	16·28	17·	17·5	23·9	17·6	20 06	16·2	15·95	17·17	16·1
July	20·5	17·8	17·6	17·8	17·5	24·07	16·4	20 45	21·66	17·72
Aug.	17·1	18·5	20·3	18·5	17.9	21·5	16·85	20 08	19·1	27·42
Sept.	17·9	16·9	19·17	17·7	18·2	19 87	15·75	20·	15·67	18·5
Oct.	20·5	17·8	20·5	18·3	18·15	18·3	17·05	20·22	17 2	16.9
Nov.	18·8	18 2	20·5	20·3	19·15	23 68	17·3	19·5	20·5	18·9
Dec.	20·1	22·5	23·9	21·1	20·68	25·6	19·0	18·35	19·16	20·76
Total	230·93	232·1	252·8	261·6	249·78	258·63	217·75	258·81	226·25	229·27

The Death-Rate per 1,000 for each year being:—

19·24	19·3	21·	21·8	20·81	21·55	18·11	20·7	18·9	19·1

The Deaths in Exeter due to the Notifiable Zymotic Diseases, were:—

Notifiable Zymotic Deaths.

Small Pox.	Diphtheria.	Scarlet Fever.	Typhoid *Fever.	Puerperal.	Erysipelas	Total
0	2	0	15	1	1	19

*Two Typhoid Deaths notified in Exeter which occurred in the Sanatorium are included in the above.

The Deaths from Non-Notifiable Diseases were:—

Non-Notifiable Zymotic Deaths.

Measles.	Whooping Cough.	Diarrhœa.	Total.
38	21	16	75

Giving the low Death-rate for Notifiable Zymotic Diseases of 0·5 per 1,000, and the Non-Notifiable Diseases of 1·97 per 1,000.

The Death-rate for the Zymotic Diseases (Notifiable and Non-Notifiable) in all England for 1897 was 2·15 per 1,000, whilst that of Exeter was 2·47 per 1,000.

The following Table shows the Annual Death-rate per 1,000 for all causes and from several Zymotic Diseases during the year 1897:—

Annual Death-rate per 1,000 from all causes and from the several Zymotic Diseases during the year 1897:—

Annual Death Rate.

	All Causes.	Principal Zymotic Diseases	Small Pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping Cough	Fever.	Diarrhœa.	Deaths under 1 year per 1,000 Births.
England and Wales ..	17·4	2·15	0·00	0·40	0·14	0·24	0·35	0·16	0·86	156
33 Great Towns	19·1	2·87	0·00	0·55	0·18	0·31	0·41	0·18	1·24	177
67 Other large Towns ..	17·2	2·41	0·00	0·43	0·15	0·24	0·38	0·16	1·05	169
England and Wales less the 100 Towns	16·4	1·62	0·00	0·29	0·12	0·19	0·31	0·14	0·57	138
Exeter	18·32	2·47	0·00	1·00	0·00	0·052	0·55	0·37	0·42	161

DISEASE INCIDENTS.

NOTIFIABLE DISEASES.

CHOLERA.

No case has occurred. Cholera.

SMALL-POX.

No case has occurred. Small Pox.

DIPHTHERIA.

Thirteen cases were notified, of which two were notified a second time. Actual number of cases occurring in Exeter 11, with two deaths. Diptheria

In each case notified the sputum was examined bacteriologically at the British Institute of Preventive Medicine. In eight cases the bacillus diphtheria was found, and in three it was not. Although in three cases the bacullus was not found, I believe clinically that almost, if not all, these cases were true diphtheria.

Table showing cases of Diphtheria Notified (corrected) and Mortality for same for past seven years:—

Year.	1891	1892	1893.	1894.	1895.	1896.	1897.	Total.
Cases Notified	12	17	14	21	22	16	11	113.
Deaths	3	3	4	17	1	3	2	33.

MEMBRANOUS CROUP.

Membranous Croup.

No Case notified.

SCARLET FEVER.

Scarlet Fever.

Only 18 cases (with 4 double notifications) leaving actual cases notified as 14 with no death. This disease has decreased almost to a minimum.

Table showing number of Cases of Scarlet Fever notified (corrected) and Mortality for the same for the past Seven Years :—

Year.	1891.	1892.	1893.	1894.	1895.	1896.	1897.	Total.
Cases Notified.	173	340	769	225	86	63	14	1673
Deaths	1	4	5	7	3	0	0	20

The number of cases of scarlet fever removed to the Sanatorium was 7, with no death. The number of cases notified in Exeter and not removed was 7, with no death. Total 14.

TYPHOID FEVER.

Typhoid Fever.

This Fever appears to have been more than ordinarily prevalent over the whole of England, with specific outbreaks (such as Maidstone and King's Lynn), and the number of cases this year is 22 over that of last year, with, however, only two more deaths.

Ninety-six cases were notified, with 15 deaths. Of these, 33 were sent to the Sanatorium, and 23 were sent to the Devon and Exeter Hospital.

Careful inspection and enquiries were made in all cases reported of this disease, and milk, food, and water supplies carefully investigated, and where any defect was found immediate steps were taken to compel its removal.

Table showing number of cases of Typhoid Fever Notified (corrected) and Mortality for the same for the past Six Years :—

Year,	1891	1892.	1893.	1894.	1895.	1896.	1897.	Total.
Cases Notified	48	47	57	56	38	74	96	416
Deaths	4	1	7	8	8	13	15	66

CONTINUED FEVER.

Ten cases notified, with no death.

Table showing number of cases of Continued Fever Notified (corrected) for and the Mortality for the last Seven Years.

Year.	1891.	1892.	1893.	1894.	1895.	1896.	1987.	Total.
Cases Notified.	0	8	3	3	3	2	10	29
Deaths	0	0	0	0	0	0	0	0

TYPHUS FEVER.

Typhus Fever

No case of this disease has been notified.

PUERPERAL FEVER.

Puerperal Fever.

Two cases notified, with one death.

ERYSIPELAS

Erysepelas.

Twenty-seven cases notified, with one death.

Non-Notifiable Diseases.

MEASLES.

Measles

From my own experience, and from the large proportionate number of deaths, 38, which chiefly occurred in the first three months of the year, I know that measles was generally epidemic during that period.

WHOOPING COUGH.

Whooping Cough

This disease was also very prevalent last year mostly at the beginning of the year, but continuing more or less all through it. The number of deaths was 21.

DIARRHŒA.

Diarrhœa

The number of deaths from this disease was less than that of last year, when we had a much hotter summer. 16 in 1897, against 22 in 1896.

INFECTIOUS DISEASES.

Infectious Diseases

The details of Infectious Diseases notified during the year (corrected) are set out in Tables I. and II., and the weekly notifications during the year (also corrected) are shown in Chart I.

The weekly mortality from these diseases is shewn in Chart II., and the localities in which fatal cases have occurred are indicated on the accompanying Map of the City.

SANATORIUM OR FEVER HOSPITAL.

Sanatorium Report

Report on Sanatorium for 1897.

Gentlemen,

We have to report that the number of cases treated this year is considerably below those treated in 1894 and 1896, but slightly above those of 1895, viz.:—

1894—Total treated at Sanatorium			...	...	230
1895—Ditto	Ditto	...	...	...	91
1896—Ditto	Ditto	...	...	...	132
1897—Ditto	Ditto	...	...	...	94

But the number of cases from the County of Devon continues to show a steady increase, proving that the advantages of our Isolation Hospital are more and more appreciated each year.

Cases from County of Devon			(1894)	...	... 6
Ditto	ditto	ditto	(1895)	...	... 20
Ditto	ditto	ditto	(1896)	...	... 32
Ditto	ditto	ditto	(1897)	...	... 40

Seven deaths occurred amongst the Patients from the County of Devon.

Cases treated from the County and City of Exeter...	54
Cases treated from the County of Devon... ...	40
	94

With 9 deaths; 7 from typhoid fever and 2 from diphtheria giving a death-rate of 7·5 per 100.

The number of deaths from Exeter was 2 from typhoid out of 54.
The number of deaths from County of Devon was 5 typhoid and 2 diphtheria out of 40.

The small Death-rate from Exeter Patients points prominently to the great advantage *to the Patient* of our system of prompt removal to the Sanatorium; whereas as yet there has been considerable delay before the County of Devon cases have been admitted.

Sanatorium Report

The average duration of each Patient's stay in the Sanatorium was 47·63 days against 50·48 in 1896.

DIPHTHERIA.—Eleven cases of this disease were treated, with 2 deaths (both from the County of Devon). In each case the Sputum was sent to the British Institute of Preventive Medicine, and no case was discharged until it was reported to be free from the Diphtheria Baccilli.

The cases of Zymotic Disease notified in Exeter were 175; of these 15 were notified twice, leaving the actual number of cases as 160, of which 54 cases were sent to the Sanatorium and 23 to the Devon and Exeter Hospital.

Schedules are appended.

We are, Gentlemen,

Faithfully yours,

JOHN WOODMAN,
EDWARD A. BRASH,
GEORGE T. CLAPP,
JOHN MACKEITH.

Summary of Cases treated at the Sanatorium for the year 1897 :—

Disease Treated.	Remaining 1st Jan., 1898.	Admitted during 1897	Discharged Cured	Deaths.	Total Treated during 1897	Remaining 1st Jan., 1898
Tophoid Fever	—	60	41	7	60	12
Scarlet Fever	7	11	16	—	18	2
Small Pox	—	—	—	—	—	—
Diptheria	—	11	6	2	11	3
Measles	—	5	5	—	5	—
Total	7	87	68	9	94	17

Sanatorium Report.

Summary of Cases treated at the Sanatorium from the County of Devon, for the year 1897, and included in the above :—

Diseases Treated.	Remaining 1st Jan., 1897	Admitted during 1897	Discharged Cured.	Deaths.	Total Treated during 1896	Remaining 1st Jan., 1898
Typhoid Fever	—	27	19	5	27	3
Scarlet Fever	3	4	6	—	7	1
Small Pox	—	—	—	—	—	—
Diphtheria	—	6	2	2	6	2
Measles	—	—	—	—	—	—
Total	3	37	27	7	40	6

Summary of Typhoid Fever Cases treated at the Devon and Exeter Hospital for the year 1897 :—

Diseases.	Cases Admitted.	Discharged Cured.	Deaths.	Total treated during '97	Remaining 1st Jan., 97
Typhoid	18 ..	11 ..	4 ..	18 ..	3

Sanatorium Report

Schedule of Cases treated at the Sanatorium for the year 1897:

DATE.	Cases treated					Discharged Cured.					Deaths.					Remaining on the last of the Month.				
	Typhoid Fever.	Scarlet Fever.	Diphtheria.	Measles.		Typhoid Fever.	Scarlet Fever.	Diphtheria.	Measles.		Typhoid Fever.	Scarlet Fever.	Diphtheria.	Measles.		Typhoid Fever.	Scarlet Fever.	Diphtheria.	Measles.	
Remaining on Jan. 1st, 1897		7	..	..		..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
January	..	3	1	..	..	..	7	..	..	..	..	..	..	..	..	..	3	1	..	..
February	..	1	..	1	..		1	1	1	..	..	..	..	..	..	..	3	..	..	..
March	..	..		3	..	..	2	..	..	..	..	..	..	..	..	..	1	..	3	..
April	..	..	..	1	..	..	1	..	3	..	..	..	..	..	..	..	..	..	1	..
May	..	..	..	..	..	..	..	..	1		..	..	..	..	..	..	.	..	..	..
June	2	1	1	..	..	..	..	..	..	..	..	..	..	..	..	2	1	1	..	..
July	5	..	1	..	..	..	..	1	..	..	2	..	..	..	..	5	1	..	..	..
August	14	1	2	..	..	2	1	1	..	..	..	..	.	..	..	17	1	1	..	..
September	13	3	2	..	..	6	1	1	..	.	1	..	1	..	..	23	3	1	..	..
October	11	1	..	..	..	14	..	1	..	..	1	..	..	..	..	19	4	..	..	..
November	7	..	3	..	..	0	1	..	..	..	3		1	..	..	13	3	2	..	..
December	8	1	2	..	..	9	2	1	..	..	.	..	..	..	..	12	2	3	..	..
Total	60	18	11	5	..	41	16	6	5	..	7	..	2	..	..	91	22	9	4	..

Average time of Patient's treatment 47·63 days.

Sana-torium Report

Schedule of Cases treated at the Devon and Exeter Hospital for the year 1897 :—

Month.	Cases Admitted.	Discharged Cured.	Deaths.	Remaining on last of each month
	Typhoid.	Typhoid.	Typhoid.	Typhoid.
Remaining on 1st Jan., 1897 ..	3	--	—	—
January	2	2	1	2
February	1	1	—	2
March		—	—	2
April		2	—	—
May	5	—	—	5
June	3	1	2	5
July	1	4	—	2
August	6	1	—	7
September	—	4	—	3
October	5	2	1	5
November	—	—	—	5
December	—	2	—	3
Total.	26	19	4	

Average time of Patient's treatment, 44·2 days.

Summary of Cases treated at the Devon and Exeter Hospital for the year 1897 :—

Disease Treated.	Remaining on 1st Jan., 1897	Admitted during year 1897	Discharged Cured.	Deaths.	Total Treated during year 1897	Remain-under treat-ment 1st Jan., 1898
Typhoid	3	23	19	4	26	3
Total	3	23	19	4	26	3

SUMMARY OF ACTION TAKEN TO LIMIT THE SPREAD OF INFECTIOUS DISEASES.

Summary

In every case notified the premises were promptly visited by the Sanitary Inspector. In all cases where proper isolation could not be provided the Patients were *at once* removed to the Sanatorium, every assistance given, and disinfectants supplied in all cases of need. Precautionary notices were issued, and notices of houses infected, at once sent to the Schools and the Librarian at the Free Library, and also to the Clerk of the School Board. Besides this, all rooms and clothes have been thoroughly disinfected under the superintendence of the Sanitary Inspector.

During the past year 122 rooms were fumigated after cases of infectious disease, and 3,558 articles of clothing and bedding disinfected. The Table immediately following shows an account in detail of the work:—

Sanatorium Report

LIST OF ARTICLES Disinfected by Superheated Steam in the "Washington Lyon" during the Year 1897.

Mattresses	273
Palliasses	176
Blankets	389
Quilts	108
Rugs	110
Suits	115
Bolsters	150
Bedties	201
Carpets	173
Dresses	127
Dressing Gowns	87
Cushions	107
Curtains	134
Underlinen	293
Coats	158
Other Articles	957
Total for 1897	3558
Rooms Disinfected	122

SEWAGE.

During the past two years a portion of the Sewage of Exeter has been very successfully treated by the now well-known "Exeter," or "The Septic Tank System," invented by your City Surveyor, Donald Cameron, Esq., and patented by Messrs. Cameron, Martin, and Commin. Sewage

The Sewage from St. Leonard's, comprising a population of 1,500 persons, has been entirely, and in my opinion most satisfactorily, treated by this system since August, 1896.

A Local Government Board Enquiry was held in November last by Major-General Crozier, R.E., and Dr. Thompson, at which the City Council asked to be allowed to borrow certain sums to enable them to extend this system so that they may be able to treat the whole of the sewage of the City in the same manner, and by an intercepting sewer carry all the sewage to these works, and prevent entirely any flow of crude sewage into the Exe. At this enquiry a large number of chemical and bacteriological experts gave evidence in its favour, such as Drs. Dupree, Sims-Woodhead, and Rideal, Messrs. Dibdin, Thudicum and Moor.

There was practically no opposition, as the proposals of the Exeter Council met with the approval of the representatives of the County Council of Devon and the Urban District of St. Thomas.

I myself have no doubt as to the success of the system, as I have *very* frequently visited the works and taken numerous samples of the effluent and filtrate. As we asked in our application to be allowed to discharge our filtrate (which is colourless and inodourous) direct into the River Exe, some of the officials of the Local Government Board appear to have thought this contravened the recommendations of the Royal Commission on Pollution of Rivers.

We have just heard, therefore, that the Government intend very shortly to appoint another Royal Commission, under the Presidency of the Earl of Iddesleigh, to consider especially the biological treatment of sewage. From the opinions expressed at the Sanitary Congress (held last September at Leeds) on Mr. Cameron's paper, and the evidence given here before the Local Government Board Enquiry, I feel sure of the triumph of

Sewage

the Biological treatment of sewage and Mr. Cameron's system over both sewage farms, and treatment by precipitation, and that the treatment of the sewage of the City by this system will be sanctioned.

Gas

One proof of the great changes that take place in the Septic Tank is the large amount of Meythene Gas which is generated. Anyone passing along the Topsham Road at night (from which the works can be seen) must be struck with the brilliant appearance of the light at the works. This light is entirely produced from a portion only of the gas generated in the tank. This gas, I think, in the future will prove a valuable bye product.

In the meantime I cannot but regret the delay thus caused to the carrying out of our new sewage works.

WATER SUPPLY.

The Water Supply of the City is taken from the River Exe, above the junction of the Culm through a closed culvert. It is thus first filtered through the gravel of the river bed.

It is examined quarterly by the Public Analyst, both by chemical and bacteriological methods. Particulars of such examinations I append.

It is intended to augment the supply, and plans are prepared by the City Surveyor, which have been approved by the Council, and are to be submitted to the Local Government Board, which will largely increase the supply of water to Exeter by increasing considerably the capacity of the works, and constructing large filter beds at Pynes, so that filtered water alone shall be pumped up to our reservoirs. At present filtration takes place in connection with the reservoirs.

When these works are completed the supply for 24 hours, which at present is 1,750,000 gallons, will be increased to 2,550,000 gallons per 24 hours. Practically we have an unlimited supply of water, and have never suffered as other towns have from an inefficient supply of water in the driest summers.

ANALYST'S REPORT.

Public Analyst's Laboratory,
The Close, Exeter,
April 14th, 1897.

Results of the Analysis of two Samples of Water drawn on March 20th and April 5th from the Laboratory Tap on Main.

Temperature when drawn	48° F.
Smell when heated to 212° F	Odourless.
	Parts per 100,000.
Free Ammonia	·001
Albumenoid Ammonia	·007
Organic Nitrogen	·0082
Nitrogen as Nitrites and Nitrates	·164
Oxygen absorbed in 4 hours at 80° F.	·0707
,, ,, ,, at 65° F	·0508
Chlorine	1·40
Hardness before Boiling	5·3
Hardness after boiling	4·7
Phosphoric Acid	trace
Total Solid Matter	8·0

The Tap Water contained on March 25th 6·06 c. c. of free oxygen per litre.
On April 13th 6·30 c. c. per litre.

FRANK P. PERKINS, Analyst.

Public Analyst's Laboratory,
The Close, Exeter,
June 26th, 1897.

Results of the Analysis of a Sample of Water.

Description—Exeter Supply drawn from Laboratory Tap on the Main, June 15, 1897.

Temperature when drawn	64° F.
Colour in 2-ft. tube	Brownish.
Odour	None

	Parts per 100,000.
Free Ammonia	None
Albumenoid Ammonia	·007
Organic Nitrogen	·009
Nitrogen as Nitrates and Nitrites	·275
Oxygen absorbed 4 hours 80° F.	·086
Hardness before Boiling	6·7
Hardness after Boiling	6·2
Phosphoric Acid	traces
Chlorine	1·3
Total Solid Matter	10·0

Bacterial Contents—A sample drawn from the Laboratory Tap on the Main after being allowed to run for several minutes gave 86 colonies per 1 cubic centimetre.

FRANK P. PERKINS, Analyst.

Public Analyst's Laboratory,
The Close, Exeter,
September 23rd, 1897.

To the Council of Exeter.

Results of the Analysis of a Sample of Water.

Description—Exeter Supply drawn from Laboratory Tap on the Main, September 16th, 1897.

Temperature when drawn .. .. .. 59° F.

	Parts per 100,000.
Alkalinity	5·5
Free Ammonia	None
Albumenoid Ammonia	·008
Total Organic Nitrogen	·016
Nitrogen as Nitrates and Nitrites	·109
Oxygen absorbed (4 hours, 80° F.)	·072
Chlorine	1·20
Phosphoric Acid..	traces
Hardness before Boiling	5·4
Hardness after Boiling	5·0
Total Solid Matter	8·0
Antydrous Sulphuric Acid (SO_3) present as Suplhates	·618

FRANK P. PERKINS, F.I.C.,
Member Society Public Analysts.

Public Analyst's Laboratory,
The Close, Exeter,
December 21st, 1897.

To the Council of Exeter.

Results of the Analysis of a Sample of Water.

Description—Exeter Supply drawn from Laboratory Tap on the Main, December 11th, 1897.

Temperature when drawn .. .. .. 46° F.

Colour, viewed through 2 ft. tube, slightly yellow; smell, when heated, odourless.

	Parts per 100,000.
Alkalinity	4·5
Free Ammonia	·001
Albumenoid Ammonia	·008
Total Organic Nitrogen	·143
Nitrogen as Nitrates and Nitrites	·109
Oxygen consumed by Organic Matter at 80° F. in four hours	·0754
Hardness before Boiling	4·4
Hardness after Boiling	4·4
Phosphoric Acid	traces
Chlorine	1·3
Total Solid Matter	8·0

Bacterial contents, 1·c.c.; developed 80 Colonies (3rd day); sample drawn, December 17th.

FRANK P. PERKINS, F.I.C.,
Public Analyst, &c.

SLAUGHTER-HOUSES.

Slaughter-houses

The Public Abattoir is every year more and more used, and the nine private slaughter-houses (which are carefully and regularly inspected) less used. This I consider very satisfactory.

BAKEHOUSES.

Bake-houses

There are 61 Bakehouses within the City, all of which have been duly inspected, and I am glad to say that in the large majority of cases they have been found in good condition, even exceeding the requirements of the Act of Parliament. In the few cases where the conditions were not found satisfactory notices were served, and in every case duly complied with.

DAIRIES, MILK SHOPS, AND COW SHEDS.

Dairies, etc.

These have been regularly and carefully inspected, and samples of milk, cream, and butter taken for analysis, with on the whole highly satisfactory results. The number of cow sheds in the City is six, all in the rural districts of the County of Exeter.

SALE OF FOODS AND DRUGS ACT.

Foods and Drugs Act

One hundred samples have during the past year been taken for analysis.

The number of adulterated samples shows an increase on last year, and a decrease on that of the two previous years, viz.:—1894, 17 per cent.; 1895, 15 per cent.; 1896, 11 per cent.; 1897, 13 per cent.

Every precaution has been taken to prevent the object of the purchase becoming known to the seller until after such purchase has been completed, in many cases the regular customers of the tradesmen purchasing the samples for the Inspector. Taking the population of the City as 38,000, it will be seen that one sample was taken for every 380 inhabitants. This regular and systematic method of obtaining samples in the City has, no doubt, considerably reduced the percentage of adulteration.

Abstract of Samples taken for Analysis for the year 1897.

	Milk.	Butter.	Cream.	Coffee.	Pepper.	Oatmeal.	Vinegar.	Gin.	Whiskey.	Nuggets. (Sweets)	Total
Examined	32	21	8	12	10	4	3	4	4	2	100
Adulterated..	9	2	0	1	0	0	0	1	0	0	13

Amount of Adulteration, Proceedings Taken and Fines

No. of Sample	Article Adulterated.	Amount of Adulteration.	Proceedings Taken.	Result of Proceedings.	Magisterial Proceedings
9	Milk ..	·34 fat removed ..	None		
45	Milk ..	1·65 p.c. added water ..	None		
48	Milk ..	7·53 p.c. ,, ,, ..	Summoned ..	Fined 10s. and expenses.	
57	Milk ..	4 p.c. ,, ,, ..	Summoned ..	Fined £3	
58	Milk ..	10·24 p.c. ,, ,, ..	Summoned ..	Fined £3	
62	Milk ..	2·4 p.c. ,, ,, ..	None		
70	Milk ..	3·89 p.c. ,, ,, ..	Summoned ..	Fined £4 and expenses.	
71	Milk ..	13·18 p.c. ,, ,, ..	Summoned ..	Fined £4 and expenses.	
72	Milk ..	16·17 p.c. ,, ,, ..	Summoned ..	Fined £4 and expenses.	
49	Butter ..	20·2 p.c. ,, ,, ..	None		
51	Butter ..	29·9 p.c. ,, ,, ..	None		
78	Coffee ..	30·3 p.c. added chicory..	None		
96	Gin ..	3·58 p.c. added water ..	None		

MAGISTERIAL PROCEEDINGS RESPECTING VARIOUS CASES BROUGHT BEFORE THE JUSTICES DURING THE YEAR 1897:—

Magisterial Proceedings

No.	Nature of Offence.	Date of Hearing.	Result.
1	Depositing 56 pieces of Salt Beef and 6 pieces of fresh Beef unfit for food.	9th. August	Fined £5 & expenses
2	Selling Milk Adulterated with 7·53 p.c. added water.	13th. August	Fined 10s. & expenses
3	Selling Milk Adulterated with 4 p.c. added water.	28th. September	Fined £3 & expenses
4	Selling Milk Adulterated with 10·24 p.c. added water.	28th. September	Fined £3 & expenses
5	Selling Milk Adulterated with 3.89 p.c. added water.	4th. November	Fined £4 & expenses
6	Selling Milk Adulterated with 16·17 p.c. added water.	4th. November	Fined £4 & expenses
7	Selling Milk Adulterated with 13.18 p.c. added water.	4th. November	Fined £4 & expenses

METEOROLOGICAL READINGS.

I have again to thank the Committee of the Devon and Exeter Institution and their Librarian (A. F. Allinson, Esq., M.A.) for their continued courtesy in supplying the Meteorological Readings for the year.

METEOROLOGICAL READINGS FOR THE YEAR 1897.

MONTH.	Barometer Corrected.	Thermometers in Shade.		MEANS OF					TOTAL OF		REMARKS.
				Thermometers.		Dew Point.	Thermometers in Shade.				
		Highest Reading.	Lowest Reading.	Dry Bulb.	Wet Bulb.		Maximum.	Minimum.	Rain in inches	Number of Wet Days. *	
January	29·881	48·0	23·0	38·0	37·1	35·9	40 2	33·2	2·96	21	A month of violent winds and storms of rain. The early morning of March 3rd (Ash Wednesday) was remarkable for the severe gale which blew down so many trees and wrecked several houses in Exeter.
February	30·101	57·0	35·0	46·7	45 8	44·9	50·8	42·7	3·51	16	
March	29·666	59·0	34·0	47·8	45·7	43 5	53·0	41·0	4.74	18	
April	29·856	64·0	35·0	49·2	46·3	43·1	54·2	41·9	3·55	21	
May	30·162	74·0	38·5	55 4	50·7	45·9	62·5	46·7	1·57	12	
June	30·043	78·5	46·5	62·5	59·3	56·7	70·1	54·3	2·64	10	Heavy rainfall on the 8th.
July	30·044	82·0	51·0	67·4	62·7	59·2	73·4	56 8	·72	9	A dry month.
August	29·832	79·0	51·0	64·7	60·4	55·9	69·4	55·9	3·71	22	A wet month.
September	30·042	68·0	42·0	58·5	54·7	51·4	63·2	48·6	3·09	18	
October	30·151	65·0	37·0	53·9	51·0	48·3	58·6	46·6	1·17	10	
November	30·177	60·0	32·0	49·0	47·2	45·6	51·0	40·8	1·36	11	
December	29·983	53·0	30·0	45·4	43·8	42·1	47·3	37·2	5·12	19	Wet and stormy month.

Giving a total rainfall for 1897 of 34·14 inches and the total number of wet days 187. *A Fall of 0·01 inches constitutes a wet day.

Table shewing the Rain fall in Exeter for 10 previous years and number of wet days.

Rain fall in Exeter.

Year.	*Gross Rainfall.*	*No. of Wet Days*	
1888	32·12	149	Average rain for the previous ten years, 28·28 inches.
1889	23·48	137	
1890	28·48	141	Average number of wet days in the previous ten years, 146·8
1891	36·98	150	
1892	23·24	114	
1893	24·43	139	
1894	36·73	213	
1895	32·62	173	
1896	22·63	153	
1897	34·14	187	

The rainfall for 1897 is 5·86 above the average for the previous ten years, and the number of wet days 40 above the average for the same number of years.

TABLE I.

Return of the number of Cases of Infectious Diseases reported to the Medical Officer of Health during the year 1897, and Deaths from the Disease notified.

Disease	Cases Notified during year 1897	Deaths Registered during Year 1897
Small Pox	—	—
Cholera	—	—
Diphtheria	13	2
Membranous Croup ..	—	—
Erysipelas	27	1
Scarlet Fever	18	—
Enteric or Typhoid Fever ..	105	15
Typhus	—	—
Puerperal	2	1
Continued	10	—
Total	175	19

Deaths from Infectious Diseases

2 Deaths from Typhoid occurred at the Sanatorium, Pinhoe.

9 cases of Typhoid Fever, 2 of Diphtheria, and 4 of Scarlet Fever, included in the above Table, were notified twice.

TABLE II.

Corrected Monthly Returns of the Number of Cases of Infectious Disease occurring during the Year 1897:—

Monthly Return

Month.	DISEASE NOTIFIED									
	Small Pox.	*Cholera.*	*Diphtheria.*	*Memb. Croup.*	*Erysipelas.*	*Scarlet Fever.*	*Typhoid ,,*	*Puerperal ,,*	*Typhus ,,*	*Continued ,*
January ..	—	—	1	—	4	2	1	—	—	—
February ..	—	—	3	—	3	—	4	—	—	—
March ..	—	—	—	—	1	1	2	—	—	1
April ..	—	—	—	—	5	—	2	1	—	—
May ..	—	—	—	—	4	—	8	—	—	3
June ..	—	—	1	—	2	1	2	—	—	1
July .	—	—	—	—	—	2	8	—	—	1
August ..	—	—	—	—	1	2	18	—	—	—
September ...	—	—	2	—	2	3	16	—	—	3
October ...	—	—	1	—	1	1	15	—	—	1
November ...	—	—	1	—	2	—	10	1	—	—
December ...	—	—	2	—	2	2	10	—	—	—
Total ..	—	—	11	—	27	14	96	2	—	10

TABLE III.

Shewing the Number of Deaths from all Causes.

	No. of Deaths.
I.—SPECIFIC FEBRILE, OR ZYMOTIC DISEASES—	
1. Miasmatic Diseases	74
2. Diarrhœal ,, ...	16
3. Malarial ,, ...	—
4. Zoogenous ,, ...	—
5. Venereal ,, ...	5
6. Septic ,, ...	2
II.—PARASITIC DISEASES	—
III.—DIETIC DISEASES	2
IV.—CONSTITUTIONAL DISEASES	121
V.—DEVELOPMENTAL DISEASES	93
VI.—LOCAL DISEASES	—
1. Diseases of Nervous System	101
2. Diseases of Organs of Special Sense	1
3. Diseases of Circulatory System	76
4. Diseases of Respiratory System	130
5. Diseases of Digestive System	60
6. Diseases of Lymphatic System	1
7. Diseases of Gland-like Organs of Uncertain Use	—
8. Diseases of Urinary System	20
9. Diseases of Reproductive System	—
(*a*). Diseases of Organs of Generation	1
(*b*). Diseases of Parturition	4
10. Diseases of Bones and Joints	6
11. Diseases of Integumentary System	—
VII.—VIOLENCE.	
1. Accident or Negligence	26
2. Homicide	—
3. Suicide	4
4 Execution	—
VIII.—ILL-DEFINED AND NOT SPECIFIED CAUSES.	8
Total	751

TABLE IV.

Showing Ages of Deaths Registered from all Causes during the Year 1897.

	AGES.											Totals	55 to 60
	0 to 1	1 to 5	5 to 15	15 to 25	25 to 35	35 to 45	45 to 55	55 to 65	65 to 75	75 to 85	85 upwards		
I.—Specific Febrile, or Zymotic Diseases	31	43	6	4	3	3			3	2		97	2
II.—Parasitic Diseases ..													
III.—Dietic Diseases				1			1					2	
IV.—Constitutional Diseases ..	8	11	9	14	15	17	17	5	15	1		121	9
V.—Developmental Diseases ..	32	2							7	35	17	93	
VI.—Local Diseases	75	38	12	16	17	30	28	34	71	48	7	400	24
VII.—Deaths from Violence ..	4	2	5	4	1	2	7		1	2	1	30	1
VIII.—Deaths from Ill-Defined and not Specified Causes ..				1		1	1	2	1	1	1	8	
Totals	150	96	32	40	36	53	54	41	98	89	26	751	36

TABLE V.

Showing the Deaths registered from all causes during the Year 1897.

	AGES.												
I...SPECIFIC FEBRILE, OR ZYMOTIC DISEASES.	0 to 1	1 to 5	5 to 15	15 to 25	25 to 35	35 to 45	45 to 55	55 to 65	65 to 75	75 to 85	85 Upwards	Totals.	55 to 60
1...*Miasmatic Diseases.*													
Smallpox { Vaccinated ..	..	..	..	..	..	..	..	..	..	..	..	..	..
Smallpox { Unvaccinated ..	..	..	..	..	..	..	..	..		..	.	..	..
Smallpox { No Statement ..	..	..	..	..	..	..	..	..	..	..	..	..	..
Measles	13	22	3	.	..	..	..		..	..	..	38	..
Scarlet Fever	..	..	..	..	..	..	..		..		..	..	..
Typhus	..	..	..	..	..	..	..	.	..	..	..	..	
Whooping Cough	9	12	..	..	.	..	..	..	.	..	..	21	..
Diphtheria	..	1	1	..	..	..	..	..	..	..	..	2	..
Simple Continued and Ill-defined Fever	..	..	..	..	..	..	..	..		..	..	..	.
Enteric or Typhoid Fever ..	..	2	2	4	1	1	..	..	1	..	..	13	2
Other Miasmatic Diseases ..	..	..	..	..	..	...	..	..	..	..	..	..	..
	22	37	6	4	1	1	.	..	1	..	..	74	2
2...*Diarrhœal Diseases*													
Simple Cholera	..	..	..	..	..	..	..	..	..	..	..	..	..
Diarrhœa, Dysentery	9	1	..	..	..	2	..	..	2	2	..	16	..
	9	1	..	..	..	2	..	..	2	2	..	16	..
3....*Malarial Diseases.*													
Remittent Fever	..	..	..	..	..	..	..	..	..	..	..	..	..
Ague	..	..	..	..	..		..	..	..	..	..	..	..
	..	..	..	..	..	..	..	..	..	..	..	..	..
4....*Zoogenous Diseases.*													
Cowpox and effects of Vaccination ..	..		..	.	..	..	..	..	..	..	..	..	..
Other Diseases (*e.g.*. Hydrophobia, Glanders, Splenic Fever ..	..	..	..	..	..	..	..	..	..	..	...	..	..
	..	..	..	..	..	..	..	..	..	..	..	..	..
5....*Venereal Diseases*													
Syphilis	..	4	..	..	1	..	..	..	..	..	..	5	..
Gonorrhœa, Stricture of Urethra ..	..	..	..		..		..	..	..	..	..	..	..
	..	4	..	..	1	..	..	..	..	..	..	5	..
6....*Septic Diseases.*													
Erysipelas	..	1	..	..	..	..	..	..	..	..	..	1	..
Pyæmia, Septicæmia	..	..	..	..	..	..	..	..	..	.	..	..	..
Puerperal Fever	..	..	..	..	1	..	..	..	..	..	..	1	..
	..	1	..	..	1	..	.	..	..	..	..	2	..
II....PARASITIC DISEASES.													
Thrush and other Vegetable Parasitic Diseases	..	..	.	..		..	..	..	..		..	..	..
Worms, Hydatids, and other Animal Parasitic Diseases .. .	..	..	..	..	..	..	..	..	..	..	..	..	..
	..	..	..	..	..	..	..	..	..	..	..	..	..

TABLE V.—*Continued.*

	AGES.											Totals.	55 to 60
	0 to 1	1 to 5	5 to 15	15 to 25	25 to 35	35 to 45	45 to 55	60 to 65	65 to 75	75 to 85	85 Upwards		
III.—DIETIC DISEASES.													
Want of Breast Milk, Starvation ..	..	..	..	..	..	..	..	..	..	..	..	..	..
Scurvy	..	..	..	..	..	..	..	..		..	..	..	..
Chronic Alcoholism	..	..	..	1	..	..	1	..	..	..	..	2	..
Delirium Tremens	..	..	..	..	..	..	..	..	..	..	..	..	..
				1			1					2	
IV.—CONSTITUTIONAL DISEASES.													
Rheumatic Fever, Rheumatism of the Heart	..	..	..	..	..	1	..	..	..	..	..	1	..
Rheumatism	..	..	..	1	..	1	..	..	1	..	..	3	..
Gout	..	..	..	..	..	..	..	..	..	..	..	..	..
Rickets	..	..	..	..	..	..	..	..	..	..	..	..	..
Cancer, Malignant Disease ..	..	.	..	..	..	3	10	3	9	..	..	30	5
Tabes Mesenterica	1	1	..	..	..	..	..	..	..	..	..	2	..
Tubercular Meningitis, Hydrocephalus	3	6	4	..	2	1	1	..	..	..	..	17	..
Phthisis	1	1	1	12	12	11	4	2	4	..	..	50	2
Other forms of Tuberculosis, Scrofula	3	3	4	1	1	..	1	..	..	..	..	13	..
Purpura, Hæmorrhagic Diathesis ..	..	..	..	..	..	..	..	..	..	..	..	..	..
Anæmia, Chlorosis, Leucocythæmia ..	..	..	..	..	..	..	..	..	..	..	..	1	1
Glycosuria, Diabetes Mellitus ..	..	..	..	..	..	..	..	..	1	1	..	3	1
Other Constitutional Diseases ..	..	..	..	..	..	..	1	..	..	..	..	1	..
	8	11	9	14	15	17	17	5	15	1	..	121	9
V.—DEVELOPMENTAL DISEASES.													
Premature Birth	8	..	.	..	..	..	..	..	..	..	..	8	..
Atelectasis	23	1	..	..	..	..	..	..	..	..	..	24	..
Congenital Malformations ..	1	1	..	..	..	..	..	..	..	..	..	2	..
Old Age	..	..	..	..	..	..	..	..	7	35	17	59	..
	32	2	..	..	..	..	..	..	7	35	17	93	..
VI.—LOCAL DISEASES.													
1.—*Diseases of Nervous System.*													
Inflammation of Brain or Membranes	..	1	1	1	1	..	..	1	..	..	..	5	..
Apoplexy, Softening of Brain, Hemiplegia, Brain Paralysis.. ..	..	1	..	1	3	6	6	6	19	15	2	65	6
Insanity, General Paralysis of the Insane	..	..	..	..	..	..	1	..	..	..	..	1	..
Epilepsy	..	..	..	..	..	..	..	..	1	..	..	1	..
Convulsions	20	..	.	..	..	..	..	..	..	..	..	20	
Laryngismus Stridulus (Spasm of Glottis)	1	3	..	..	..	..	..	..	..	..	..	4	..
Disease of Spinal Cord, Paraplegia, Paralysis Agitans	..	..	..	..	..	..	..	1	..	..	..	1	..
Other Diseases of Nervous System ..	..	..	..	1	1	..	..	..	..	1	..	4	1
	21	5	1	3	5	6	7	8	20	16	2	101	7

TABLE V.—*Continued.*

	AGES.											Totals.	55 to 60
	0 to 1	1 to 5	5 to 15	15 to 25	25 to 35	35 to 45	45 to 55	60 to 65	65 to 75	75 to 85	85 Upwards		
2.—*Diseases of Organs of Special Sense.*													
(*e.g.*, of Ear, Eye, Nose)	..	..	1	..	..	.	..	..	..	..	..	1	..
	..	..	1	..	..	..	..	..	..	..	..	..	..
3.—*Diseases of Circulatory System.*													
Pericarditis	..	..	..	..	..	..	..	..	..	..	..	..	..
Acute Endocardits	..	..	..	..	1	..	..	..	..	..	..	1	..
Valvular Disease of Heart ..	..	1	1	1	1	4	1	3	5	2	..	20	1
Other Diseases of Heart	1	..	2	2	1	2	2	7	13	10	1	48	7
Aneurism	..	..	..	..	1	2	..	..	1	1	..	5	.
Embolism, Thrombosis	..	..	..	..	..	..	..	..	1	..	..	1	..
Other Diseases of Blood Vessels ..	..	..	..	1	..	..	..	..	..	..	..	1	..
	1	1	3	4	4	8	3	10	20	13	1	76	8
4.—*Diseases of Respiratory System.*													
Lrygitis	1	3	..	..	..	..	..	..	..	..	..	4	..
Croup	..	..	..	..	..	..	..	..	..	.	..	..	..
Emphysem, Asthma	3	..	..	..	..	..	3	1	1	..	1	10	1
Bronchitis	18	11	..	..	..	1	4	2	16	12	2	71	5
Pneumonia	7	11	2	1	2	3	3	3	2	1	..	36	1
Pleurisy	..	1	..	..	1	..	..	..	1	..	..	3	..
Other Diseases of Respiratory System	2	..	..	..	..	..	..	..	3	1	..	6	..
	31	26	2	1	3	4	10	6	23	14	3	130	7
5.—*Diseases of Digestive System.*													
Dentition	5	1	..	..	..	..	..	..	..	..	..	6	..
Sore Throat, Quinsy	..	..	..	..	..	..	..	..	..	..	.	..	..
Diseases of Stomach . ..	3	1	..	1	1	2	..	1	..	..	..	9	..
Enteritis	8	2	..	..	..	..	..	1	..	..	..	11	..
Obstructive Diseases of Intestine ..	2	1	1	1	2	..	1	..	..	2	..	10	..
Peritonitis	..	..	1	2	1	..	1	..	1	2	..	8	..
Ascites	..	..	..	..	..	..	..	..	..	..	..	..	..
Cirrhosis of Liver	..	..	..	..	1	2	..	..	..	..	..	4	1
Jaundice and other Diseases of Liver	..	..	1	2	..	..	..	2	2	..	..	8	1
Other Diseases of Digestive System ..	1	..	..	1	..	..	..	1	1	..	..	4	..
	19	5	3	7	5	4	2	5	4	4	..	60	2
6.—*Diseases of Lyphatic System..*													
(*e.g.*, of Lymphatics and of Spleen) ..	..	..	..	..	..	1	..	..	..	..	..	1	..
	..	..	..	..	..	1	..	..	..	..	..	1	..
7.—*Diseases of Gland-like Organs of Uncertain Use.*													
(*e.g.*, Bronchocele, Addison's Disease)	..	..	..	..	..	..	..	..	..	..	..	..	..
	..	..	..	..	..	..	..	..	..	..	..	..	..

TABLE V.—*Continued.*

	AGES.												
	0 to 1	1 to 5	5 to 15	15 to 25	25 to 35	35 to 45	45 to 55	60 to 65	65 to 75	75 to 85	85 Upwards	Totals.	55 to 60
8.—*Diseases of Uninary System.*													
Nephritis	..	..	1	..	..	3	1	2	..	..	..	7	..
Bright's Disease, Albuminuria ..	..	..	..	..	..	..	3	2	2	..	..	7	..
Disease of Bladder or of Prostate ..	..	..	..	..	..	..	..	..	2	..	1	3	..
Other Diseases of the Uninary System	..	..	..	..	..	1	1	1	..	..	..	3	..
	..	..	1	..	..	4	5	5	4	..	1	20	.
9.—*Diseases of Reproductive System.*													
(A). Of Organs of Generation.													
Male Organs	..	..	..	..	..	..	..	..	..	..	..	..	..
Female Organs	..	..	..	..	..	1	..	..	..	..	..	1	..
	..	..	..	..	..	1	..	..	..	..	..	1	..
(B). Of Parturition.													
Abortion, Miscarriage	..	..	..	..	..	..	..	..	..	..	..	..	..
Puerperal Convulsions	..	..	..	..	..	..	..	..	..	.	..	..	..
Placenta prævia. Flooding ..	..	..	..	..	..	1	..	..	..	..	..	1	..
Other Accidents of Child Birth ..	1	..	..	..	..	2	..	..	..	..	..	3	..
	1	..	..	..	..	3	..	..	..	..	..	4	..
10.—*Diseases of Bones and Joints.*													
Caries, Necrosis	..	1	1	1	..	..	..	..	..	..	..	3	..
Arthritis, Ostitis, Periostitis ..	1	..	..	..	..	..	..	..	..	1	..	2	..
Other Diseases of Bones and Joints ..	1	..	..	..	..	..	..	..	..	..	..	1	..
	2	1	1	1	..	..	..	..	..	1	..	6	..
11.—*Diseases of Integumentary System.*													
Carbuncle, Phlegmon	..	..	..	..	..	..	..	..	..	..	..	..	..
Other Diseases of Integumentary System	..	..	..	..	..	..	..	..	..	..	..	..	..
	..	..	..	..	..	..	..	..	..	..	..	..	..
VII.—DEATHS FROM VIOLENCE.													
1.—*Accident or Negligence.*													
Fracture and Contusions	..	1	2	1	..	2	4	..	1	2	1	14	..
Gunshot Wounds	..	..	..	..	..	..	1	..	..	..	..	1	..
Cut, Stab	..	..	..	..	..	..	..	..	..	..	..	..	..
Burn, Scald	..	..	3	1	..	..	..	..	..	..	..	4	..
Poison	..	..	..	..	..	..	..	..	..	..	..	..	..
Drowning	1	1	..	..	..	..	..	..	..	..	..	2	..
Suffocation	3	..	..	..	..	..	..	..	..	..	..	3	..
Otherwise	..	..	..	1	..	..	1	..	..	..	..	2	..
	4	2	5	3	..	2	6	..	1	2	1	26	..

TABLE V.—*Continued.*

	AGES.											Totals	55 to 60
	0 to 1	1 to 4	5 to 15	15 to 25	25 to 35	35 to 45	45 to 55	60 to 65	65 to 75	75 to 85	85 upwards		
2.—*Homicide.*		3											
Manslaughter	..	..	..	..	..	..	..	..	..	..	..	..	..
Murder	..	..	..	..	..	..	..	..	..	..	..	..	..
	...	...	...	...	..	.	. .	...	.....	...	...	...	...
3.—*Suicide.*													
Gunshot Wounds	..	..	..	..	..	..	..	..	..	..	..	..	..
Cut, Stab	..	..	..	..	..	..	1	..	..	..	..	2	1
Poison	..	..	..	..	.	..	..	..	..	..	..	..	..
Drowning	..	..	..	1	..	..	..	..	..	..	..	1	..
Hanging	..		..	..	1	..	..	..	..	..	..	1	...
Otherwise	..	.	..	..	..	..	..	..	..	..	..	..	..
	..	..	..	1	1	..	1	..	..	..	..	4	1
4.—*Execution.*													
Hanging	..	..	..	..	..	..	..	..	..	..	..	..	...
	..	..	..	..		..	..	..	..	..	..	..	...
VIII.—DEATHS FROM ILL-DEFINED AND NOT SPECIFIED CAUSES.													
Dropsy	..	..	..	..	..	..	..	..	..	..	..	..	...
Debility, Atrophy, Inanition ..	..	..	..	..	..	.	..	..	..	..	..	..	...
Mortification	..	..	..	1	..	..	..	2	1	1	..	5	...
Tumour	..	..	..	..	..	..	1	..	..	..	...	1	...
Abscess	...	...	...	...	...	...	...	...	.....	...	1	1	...
Hæmorrhage	...	...	...	...	...	1	...	...	...	...	...	1	..
Sudden Death (cause not ascertained)	...	...	..	...	...	...	...	...	...	...	...	...	..
Causes not Specified or Ill-defined ..	..	...	...	...	...	...	..	...	...	...	...	...	..
	..	..	...	1	...	1	1	2	1	1	1	8	...

(A) TABLE OF DEATHS DURING THE YEAR 1897, IN THE EASTERN AND WESTERN DIVISION OF THE URBAN SANITARY DISTRICT OF EXETER, CLASSIFIED ACCORDING TO DISEASES, AGES, AND LOCALITIES, AND SHOWING ALSO THE POPULATION OF SUCH LOCALITIES.

EASTERN DIVISION.

Names of Localities adopted for the purpose of these Statistics; public institutions being shown as separate localities. (a)	Mortality from all causes, at subjoined ages.							(n)	Mortality from subjoined Causes, Distinguished Deaths of Children under Five Years of Age.																				
									1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
									Fevers.																					
	At all ages. (b)	Under 1 year (c)	1 and under 5 (d)	5 and under 15 (e)	15 and under 25 (f)	25 and under 60 (g)	60 and upwards (h)		Smallpox.	Scarlatina.	Diphtheria.	Membranous Croup.	Typhus.	Enteric or Typhoid.	Continued.	Relapsing.	Puerperal.	Cholera.	Erysipelas.	Measles.	Whooping Cough.	Diarrhœa and Dysentary.	Rheumatic Fever.	Ague.	Phthisis.	Bronchitis Pneumonia and Plurisy.	Heart Disease.	Injuries.	All other Diseases.	Total.
The City (not including the Hospital, Workhouse, & Eye Infirmary ..	410	90	53	17	15	87	148	Under 5	...	..	...	..		...	...	..	...	...	..	21	13	5	...	...	2	27	2	1	75	146
								5 upwds.	...	..	1	..		5	...	...	1	...	...	1	...	5	..	...	25	39	36	5	146	264
Hospital	76	1	7	8	18	32	10	Under 5	...	..		...	..	1	...	..	...	...	...	...	...	..	..	...	...	1	...	...	3	5
								5 upwds	.		...	..	..	4	..	..	...	.	...	.	..	1	1	.	3	2	6	10	44	71
Workhouse	39	.	..	1	...	12	26	Under 5	...	...	..	...	..	...	.	...	..	..	...	..	..	...	...	...	...	...	...	...	..	...
								5 upwds.	..	...			..	1	...	..	...		1	.	..	...	...	...	6	5	3	..	25	39
Totals ...	525	91	60	26	33	131	184	Under 5	.	...	...	..	..	1	...	..	...		...	21	13	5	..	...	2	28	2	1	78	151
								5 Upwds.	..	...	1	..		9	...	..	1	...	1	..	6	...	...	...	34	46	45	15	215	374

Area and Population of the District or Division to which this Return relates: Area in Acres, **649** *; Population* (1891), **23,766.**

WESTERN DIVISION.

	226	59	36	6	7	48	70	Under 5	...	...	1		...	1		...	...	..	...	14	8	5	...	...	..	20	...	...	46	95
								5 upwds.	...	...	.		.	2	...	...	...	...	...	2	..	...	...		14	15	21	3	74	131
Total	226	59	36	6	7	48	70	Under 5	...	...	1	...		1	...	...	...	.	...	14	8	5	.	...		20			46	...
								5 Upwds.	...	...	...		...	2	..	...	...	...	...	2		..	..		14	15	34	11	74	...

Area and Population of the District or Division to which this Return relates: Area in Acres, **1,241** *; Population* (1891), **13,802.**

(B) TABLE OF POPULATION, BIRTHS, AND OF NEW CASES OF INFECTIOUS SICKNESS COMING TO THE KNOWLEDGE OF THE MEDICAL OFFICER OF HEALTH, DURING THE YEAR 1897, IN THE URBAN SANITARY DISTRICT OF EXETER, CLASSIFIED ACCORDING TO DISEASES, AGES, AND LOCALITIES.

NAMES OF LOCALITIES adopted for the purpose of these Statistics; public institutions being shown as separate localities. (a)	Population at all ages. Census 1891 (b)	Estimated to middle of 1896 (c)	Registered Births. (d)	(e)	New Cases of Sickness in each Locality, come to the knowledge of the M.O.H. FEVERS. 1 Smallpox.	2 Scarlatina.	3 Diphtheria.	4 Membranous Croup.	5 Typhus.	6 Enteric or Typhoid.	7 Continued.	8 Relapsing.	9 Puerperal.	10 Cholera.	11 Erysipelas.
The City (not including the Hospital, Workhouse, & Eye Infirmary ..	36,831	37,458	906	Under 5	...	4	5	..	..	8	2	..	...	...	2
				5 upwds.	...	10	5	..	..	76	8	...	2	...	20
Hospital (total)	224	225		Under 5	...	...	1	...	...	2	...	..	..	...	...
				5 upwds.	...	..		..	..	10	...	..	...		4
Workhouse (total)	306	263		Under 5	...	...	..	...		...	.	...	..	..	...
				5 upwds.	..	..	..	..	..	..	...	..	..	..	1
Eye Infirmary (total)	43	54		Under 5	...	...	...	..	...	...	..	...	...	..	..
				5 upwds.	...	...	...	...		...	..	..	..	.	..
From the County of Devon ..				Under 5		...	...	...	...	..	...	...	..	...	...
				5 Upwds.	...	...	...	...	...	...	...	..	...	...	...
TOTALS	37,404	38,000		Under 5	..	4	6	..	..	10	2	...	...	...	2
				5 Upwds.	...	10	5	..		86	8	..	2	...	25

Number of such Cases removed from their Homes in the several Localities for Treatment in Isolated Hospital. FEVERS. 1 Small-pox	2 Scarlatina	3 Diphtheria	4 Membranous Croup.	5 Typhus.	6 Enteric or Typhoid.	7 Continued.	8 Relapsing.	9 Puerperal.	10 Cholera.	11 Erysipelas.	12 Measles.
..	2	1	...	...	6	...	...	...	..	...	...
...	5	4		...	49	...	.	...	...	4	...
...	...	...	..	...	...	..	...	...	...	..	...
...	...	...		..	....	...	...	...	...	..	...
...	..	..	...	...	...	...	...	...	...	..	...
..	..	...	..	...	...	...	...	...	..	1	.
...	...	..	...	...	...	..	..	...	...	..	...
...	..	..	...	...	...	...	...	...	...	..	..
..	1	...	.	..	1	..	...	...	..	...	..
...	3	6	...		27	..	...	...	...	...	...
..	3	1	...	...	7		...	...	...	...	...
...	8	10	...	.	76	...		...	...	5	...

Notification of Infectious Disease has been compulsory in the District since 1889. *The name of the Isolation Hospital of the City of Exeter is the Exeter Sanatorium, situate in Whipton, in the Parish of Pinhoe, about two miles from Exeter.*

SANITARY INSPECTOR'S REPORT.

I have the honour of presenting for your consideration my Annual Report as Sanitary Inspector for the City and County of the City of Exeter.

Typhoid Fever.

During the past year a very considerable portion of the time of myself and assistants have been taken up in investigating the cases of Typhoid Fever which have occurred in the City. Acting under the instructions of the Medical Officer of Health, careful inquiries have been made as to the possible cause of each case, and in every case where there was any doubt as to the quality of the milk or food supply, samples have been taken and submitted to the Public Analyst.

The sanitary condition of the premises where cases occurred have been carefully examined, and the whole of the drains and sanitary fittings tested, either with the smoke or water test. Notices have been sent to the Schoolmaster or Schoolmistress and the Clerk to the School Board in all cases where patients suffering from infectious disease were attending school, requiring that no child from the infected house be allowed to attend school until the complete recovery of the patient or the period of quarantine had elapsed; also to the Librarian of the Free Library.

Housing Working Classes.

Under the Housing of the Working Class Act, 1890, much useful work has again been accomplished, and many of the most unsanitary premises demolished, notably, the premises at the back of 18, Stepcote Hill, all of which have been pulled down, and a large open space provided for the front house, which has been put in thorough repair and thorough ventilation provided. The eight houses in Cricklepit Street, of which complaints were continually made, have been demolished. Many premises have been thoroughly overhauled and put in a good state of repair.

The investigation into the water-closet accommodation of many of the courts in the City has also taken up considerable time, and a very large number of additional water-closets have been erected, while in many of the existing ones provision for light, ventilation, and sufficient water supply have been insisted upon.

PUBLIC ABATTOIR AND PRIVATE SLAUGHTER HOUSES.

The inspections of these places have been regular and systematic, and in all cases the bye-laws have been complied with in every respect. The whole of the nine Private Slaughter Houses have been kept in a thoroughly clean condition, and not a single complaint has been received against either one during the past year.

The Public Abattoir has again been kept in a high state of efficiency, and is more appreciated than ever.

The following figures give the number of animals slaughtered in the Public Abattoir during the year 1897 :—Beasts, 1,795 ; Calves, 1,326 ; Sheep, 8,847 ; Pigs, 1,602 ; Total, 13,570.

DRAIN TESTING.

Drainage Examinations.

The number of Drains tested during the past year has largely exceeded those of previous years, 304 being tested in 1897, against 174 in 1896. In all cases where defects were found notices were served on the person responsible, and when the defects have been made good or new drains laid, they have been tested with the smoke or hydraulic test.

The examination of the drainage of houses before occupation seems to be more insisted upon than ever, and I find that people will not take houses unless the sanitary arrangements have been thoroughly tested. This work is the means of getting a large number of houses examined and put in a satisfactory condition.

UNSOUND MEAT, VEGETABLES, FOODS AND DRUGS.

The inspection of the Markets, Slaughter Houses, and Shops for the detection of unsound food has been regular and systematic, and only in one case has legal proceedings been necessary for exposing unsound food for sale. Under the Sale of Food and Drugs Acts 100 samples have been submitted to the Public Analyst for the purpose of analysis. Many of the samples taken have been purchased in the early mornings while in the course of delivery to the purchaser. The result of the analysis is shown in the Medical Officer's Report—page 25.

TABLE showing Meat, Fish, &c., seized as Unfit for Food :—

Reference Number.	*Nature of Seizure*	*Date.*
1.	...79 Boxes of Bloaters ...	...1st March.
2.	...Carcase of Lamb	...13th April.
3.	...73 Boxes of Bloaters ...	...12th June.
4.	...4 Boxes of Bloaters ...	...10th July.
5.	...9 Boxes Haddock	...10th July.
6.	...Carcase of Cow, Tuberculosis	...24th July.
7.	...56 Pieces of Salt Beef and 6 Pieces of Fresh Beef	...9th August.
8.	...Carcase of Pig, Swine Fever ...	...6th September.
9.	...Carcase of Cow, Tuberculosis	...2nd November.

BAKEHOUSES.

126 visits have been made to the 62 Bakehouses in the City, and only in a few were any sanitary defects found. The whole of the Bakehouses are limewashed twice a year in accordance with the Act.

DAIRIES, COWSHEDS, AND MILKSHOPS.

The whole of the Dairies, Cowsheds, and Milkshops have been regularly inspected to see that the Bye-laws are complied with. The unsanitary condition of two of the Cowsheds within the City has been brought to the notice of the Sanitary Committee, who at once issued orders that the same were to be put in good order or closed.

OFFENSIVE TRADES.

Offensive Trades.

All the Offensive Trades are conducted in a fairly satisfactory manner, and are regularly inspected; in only a few instances have complaints been received. These have at once been investigated, and if any nuisances were discovered notices were at once served, and the nuisance abated.

INSPECTION OF THE DISTRICT.

The Inspection of the District has again been carried on as in previous years; a house-to-house inspection of the courts, alleys, and smaller houses, and all houses registered under the Bye-laws of Houses Let in Lodgings has been conducted by myself and assistant as time would permit. This regular inspection is the means of bringing to notice many nuisances whlch can be at once abated, and I find that it is only in this way that many of the worse localities in the City can be kept clean, although I am pleased to say that there is again a very marked improvement in the sanitary condition of the City.

REPORT

OF THE

SANITARY WORK COMPLETED IN THE YEAR 1896.

Complaints Received during the Year - - -	122
Houses and Rooms Inspected - -	3130
Re-inspection of Houses and Rooms - - -	1285
Notices Served for Sanitary Amendments of Houses and Premises	374
Houses, Premises, &c., Cleaned, Repaired, and Limewashed -	47
Rooms Disinfected after Illness of an Infectious Character -	122
Drains Repaired, Cleaned, Trapped, and Ventilated - -	174
Drains Re-laid with Socketted Pipes properly Trapped and Ventilated	191
Water Closets Repaired - - -	58
Water Closets Supplied with Water - - -	62
New Water Closets Provided - - -	23
Removal of Accumulations of Dung, Stagnant Water, Animals, and other Refuse - - - -	12
Animals Removed, being improperly kept - -	2
Water Closet Cleansed by Notice H.M. Inspector - -	15
Court Yards Paved in Cement Concrete - -	35
Soil Pipes Ventilated - - - -	19
Defective Bell Traps Re-placed by Stoneware Gullies -	29
Waste Pipes Discharge into Stoneware Gullies and Trapped -	9
Slaughter-houses Limewashed and Cleansed Twice -	9

Visits to Slaughter-houses - - -	470
Bakehouses Limewashed Twice - - -	62
Visits to Bakehouses - - - -	126
Notices under the Working Classes Act - -	1
Notices Served for Drains to be opened up - -	4
Notices Served for Proper Supply of Water for Domestic Use -	2
Articles of Clothing Disinfected - - -	3558
Smoke Test applied to Drains - - -	302
Samples taken for Analysis - - -	100
Wells Closed - - - -	2
Rain Water Pipes Connected to Drains - - -	3
Cowsheds Inspected - - -	6
Dairies and Milkshops Inspected - - -	73
Visits to Schools to see that no Scholars from Infected Houses were attending - - - -	272
Notices to Managers of Schools of Infectious Sickness existing in houses from which scholars were attending - -	160
Notices to Librarian of Exeter Free Library - -	160
Workshops Inspected - - - -	103

FACTORY AND WORKSHOPS ACTS, 1878, 1891, 1895.

The Workshops have been inspected, and in some cases the water-closet accommodation has been found to be insufficient. This has at once been altered, and sufficient accommodation provided for both sexes upon notice from the Sanitary Authority.

The Shops in the City have been visited to see that the notices required by the Shop Hours' Act were posted in accordance with the requirements of the Act, and in nearly all cases the Act was found to be complied with.

A few notices have been received from H.M. Inspector of Factories as to sanitary defects, but in all cases they have at once been set right upon notice from the Sanitary Authority.

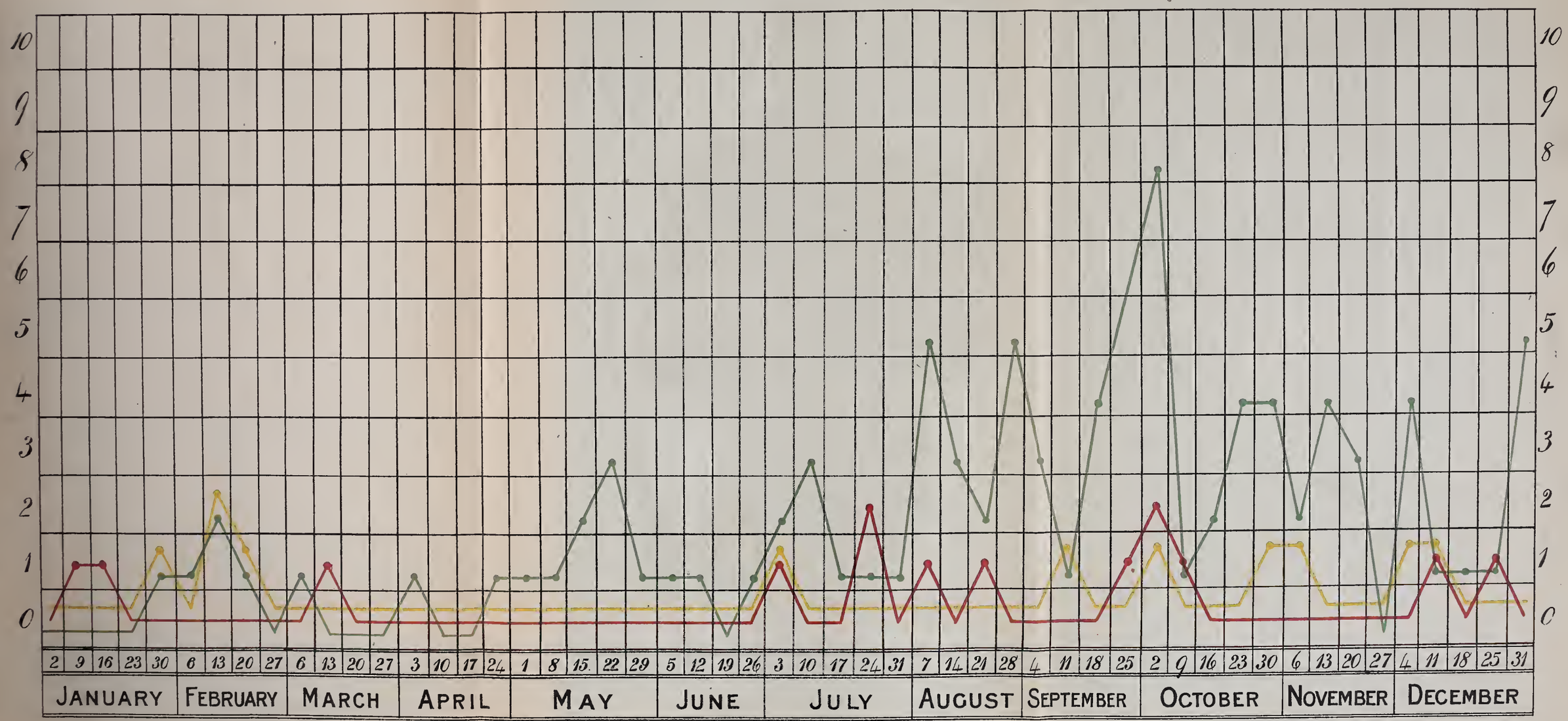
I have the honour to be,

Yours obediently,

W. J. WREFORD,

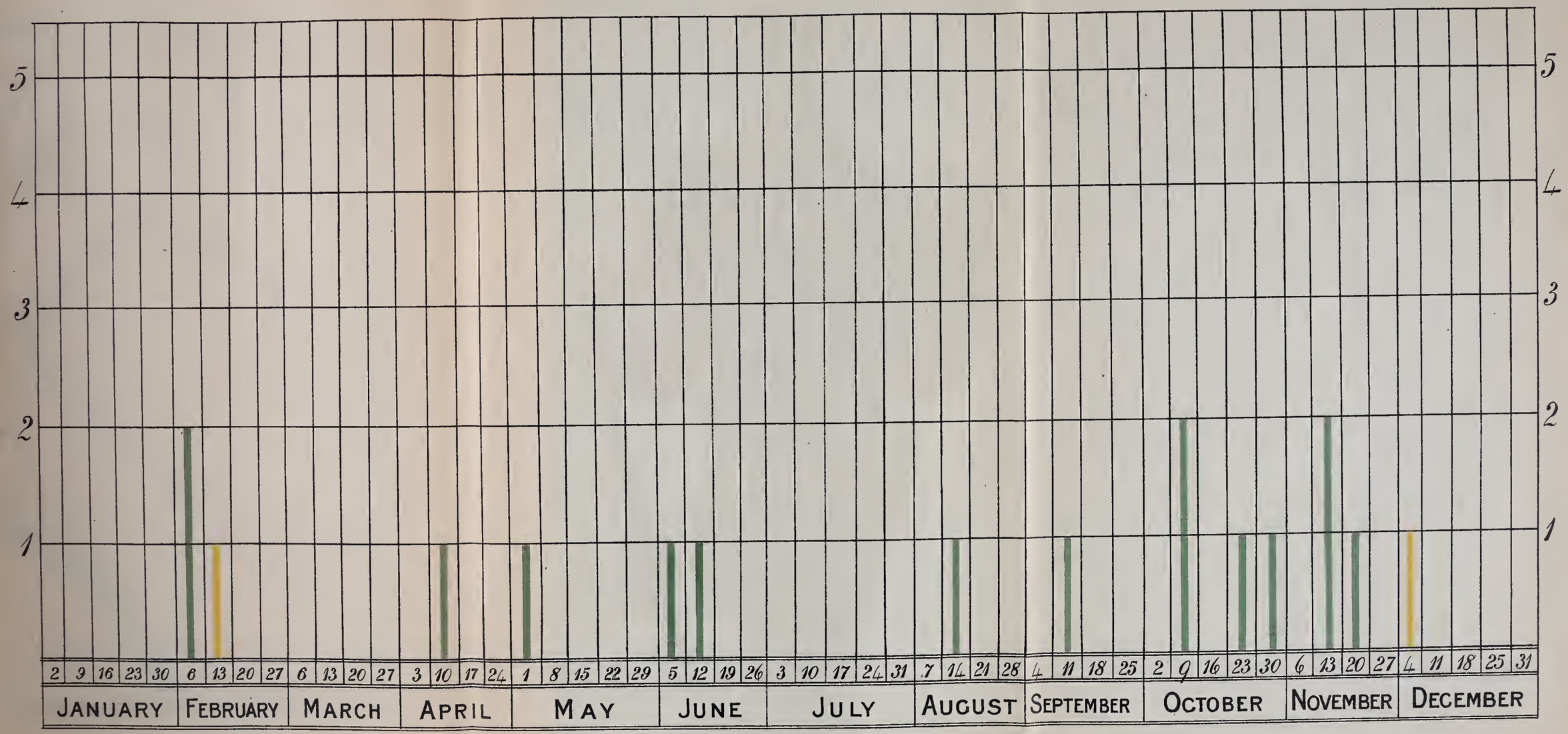
Sanitary Inspector.

Chart 1 shewing Weekly Notifications of Scarlet Fever, Typhoid Fever, & Diphtheria.



Typhoid Fever. *Scarlet Fever.* *Diphtheria.*

Chart 2 shewing Weekly Mortality from Scarlet Fever, Typhoid Fever, & Diphtheria.



Typhoid Fever. *Scarlet Fever.* *Diphtheria.*

CITY & COUNTY OF THE City of Exeter

SHOWING LOCALITIES WHERE FATAL CASES HAVE OCCURRED FROM PRINCIPAL ZYMOTIC DISEASES DURING 189

Scarlet Fever ■
Diphtheria ⅄
Typhoid Fever ✠
Measles ●

Note Western District within red boundary
Eastern " " green "

COWLEY BARTON
DURYARD
MARYPOLE
PENNSYLVANIA TERRACE
STREATHAM HALL
ST GERMANS RD
UNION ROAD
SYLVAN RD
SPRINGFIELD
CULVERLAND
VICTORIA ROAD
DEVONSHIRE PLACE
PROSPECT PARK
MANSFIELD ROAD
MOUNT PLEASANT ROAD
RAILWAY
WESTERN
ROWDEN'S CRESCENT
ST DAVID.
RED COW VILLAGE
WATERWORKS
HIGHER BARRACKS
SOUTH STREET
ST JAMES RD
OLD TIVERTON ROAD
MAY ST
FORDAYS PL
ST DAVIDS STATION
HOWELL ROAD
BURY MEADOW
PRISON
BLACKALL ROAD
LONDON AND
BLACKBOY ROAD
POLSLOE ROAD
HELE'S
HELE RD
ELMGROVE RD
QUEENS CRESCENT
YORK ROAD
OXFORD ROAD
BELMONT ROAD
CROSSPARK PL
ALBERT RD
CLIFTON HILL
NEW NORTH ROAD
QUEENS TR
QUEEN ST STATION
LONGBROOK ST
CHURCH LANE
HARRINGTON LA
SUMMERLAND ST
PARR ST
NEWTOWN
LITTLE SILVER
RICHMOND RD
ST DAVIDS HILL
PEEP LANE
Northernhay
THE CASTLE
CASTLE STREET
QUEEN STREET
SIDWELL STREET
CHURCH ST
DOMINICK ST
CLIFTON ST
EAST JOHN STREET
PORTLAND STREET
SANDFORD ST
RUSSELL ST
PARIS STREET
EATON PLACE
WORKHOUSE
HEAVITREE ROAD
HALOON RD
MUSEUM
IRON BRIDGE
DINHAM
EXE STREET
HIGH STREET
PAUL ST
NORTHERNHAY ST
DIX'S FIELD
OLD CEMETERY
MARY ARCHES ST
NORTH ST
CATHEDRAL
PALACE
GATE
SOUTHERNHAY WEST
SOUTHERNHAY EAST
BARNFIELD ROAD
DENMARK ROAD
SPICERS ROAD
COLLEGE RD
RALEIGH RD
MACDALEN ROAD
MACDALEN STREET
SOUTH BEARS BLOCK
SUN
FORE STREET
WEST
BRIDGE ST
TRINITY ST
COOMBE ST
JAMES'
HOLLOWAY ST
BULL MEADOW
QUAY LANE
QUAY
COMMERCIAL ROAD
SHILHAY
BONHAY ROAD
BONHAY
CATTLE MARKET
OKEHAMPTON ST
ST THOMAS STATION
ALBERT RD
ST THOMAS
RIVER EXE
THE BASIN
CANAL
LARKBEARE HOUSE
ST LEONARDS ROAD
WONFORD ROAD
MOUNT RADFORD
LYNDHURST ROAD
VICTORIA ROAD
GRAMMAR SCHOOL
MATFORD ROAD
TREWS WEIR
TOPSHAM BARRACKS
GREAT WESTERN RAILWAY

Scale
0 ¼ ½ ¾ Mile

J. TOWNSEND & SON, LITH^rs, EXETER